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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte BRAN FERREN, W. DANIEL HILLIS, RODERICK A. HYDE,
MURIEL Y. ISHIKAWA, EDWARD K. Y. JUNG, ERIC C. LEUTHARDT,
NATHAN P. MYHRVOLD, THOMAS J. NUGENT JR.,
ELIZABETH A. SWEENEY, CLARENCE T. TEGREENE,
LOWELL L. WOOD JR., and VICTORIA Y.H. WOOD

Appeal 2020-001061
Application 15/226,991
Technology Center 3700

Before MURRIEL E. CRAWFORD, MICHAEL C. ASTORINO, and
NINA L. MEDLOCK, *Administrative Patent Judges*.

ASTORINO, *Administrative Patent Judge*.

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134(a), the Appellant¹ appeals from the Examiner's decision to reject claims 132–134, 137, 140–144, 147, and 152–154.² We have jurisdiction under 35 U.S.C. § 6(b). We REVERSE.

¹ We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42. The Appellant identifies the real party in interest as “Gearbox, LLC.” Appeal Br. 4.

² The rejections of claims 96, 97, 100–106, 112–125, 129–131, and 148–151 are withdrawn. Ans. 3.

STATEMENT OF THE CASE

Subject Matter on Appeal

The Appellant’s invention relates to “methods for controlling movement of a lumen traveling device through a body tube tree, as well as associated systems and devices.” Spec. 8:27–29. Claim 132, the sole independent claim on appeal, is representative of the claimed subject matter and recites:

132. A lumen traveling device control system comprising:
 - one or more non-transitory machine readable data storage media bearing
 - one or more instructions for causing a propelling mechanism to produce movement of the lumen-traveling device through a man-made lumen within the body of a subject, wherein the lumen-traveling device includes a structural element configured to fit within the man-made lumen, the propelling mechanism, motion control circuitry and response control circuitry, and an active portion;
 - one or more instructions for receiving a signal indicative of detection of a parameter value of interest;
 - one or more instructions for generating a response control signal with the response control circuitry responsive to receipt of the signal indicative of detection of the parameter value of interest; and
 - one or more instructions for performing an action with the active portion responsive to receipt of the response control signal.

Appeal Br. 60–61, Claims App.

Rejections

Claims 132, 137, 141–144, 147, 153, and 154 are rejected under U.S.C. § 102(b) as anticipated by Strommer (US 2006/0058647 A1, pub. Mar. 16, 2006).

Claim 133 is rejected under 35 U.S.C. § 103(a) as unpatentable over Strommer and Hardin (US 2008/0183100 A1, pub. July 31, 2008).

Claims 134 and 152 are rejected under 35 U.S.C. § 103(a) as unpatentable over Strommer and Khait (US 2013/0080119 A1, pub. Mar. 28, 2013).

Claim 140 is rejected under 35 U.S.C. § 103(a) as unpatentable over Strommer and Riviere (US 2005/0154376 A1, pub. July 14, 2005).

Claim 140 is rejected under 35 U.S.C. § 103(a) as unpatentable over Strommer and Chiel (US 2003/0065250 A1, pub. Apr. 3, 2003).

ANALYSIS

Independent claim 132 calls for “[a] lumen traveling device control system” with a “non-transitory machine readable data storage media” having “one or more instructions for performing an action with the active portion responsive to receipt of the response control signal.” Appeal Br. 60–61, Claims App.

The Examiner finds the claimed “active portion” reads on position sensor (Strommer’s MPS sensor 594) and the claimed “response control signal” corresponds to the automatic movement of a catheter upon finding a

blocked passage or lumen which is narrower than expected.³ *See* Final Act. 6–7 (citing Strommer ¶ 182); Ans. 5–6. As for the aforementioned instruction of claim 132, the Examiner finds:

Strommer’s device includes instructions for causing element [MPS sensor] 594 to perform its various tasks, including sending signals indicative of its three-dimensional positioning; particularly as these signals indicative of positioning are sent while the device moves (that is, while the “response control” signal causes the direction of movement to change upon detection of the parameter value of interest indicating that the route must change – see, for example, paragraphs [0182] and [0185]), these instructions for updated location sensing (as performed by the active portion) are generated after receipt of a “response controls signal”, and as such are “responsive” to it.

Ans. 5.

The Appellant points out that controller 584 constantly receives signals from MPS sensor 594. *See* Reply Br. 6 (“Controller 584 constantly receives a signal from MPS 588 respective of three-dimensional coordinates of MPS sensor 594 at any given time (i.e., a feedback), thereby allowing moving mechanism 586 to apply corrections to possible errors of movement along path 608.” (quoting Strommer ¶ 185)). The Appellant argues that “[t]he Examiner has supplied no evidence that MPS sensor 594 sends signals ‘indicative of its three-dimensional positioning’ responsive to a ‘response control signal.’” *Id.* (citing Strommer ¶ 185). The Appellant’s argument is persuasive.

³ “MPS” is an acronym for its “medical positioning system,” i.e., “an electromagnetic position detection system which detects the position of an object, according to an output of a three-axis coil which responds to electromagnetic radiation of an electromagnetic transmitter.” Strommer ¶ 63.

The Examiner is correct in finding that MPS sensor 594 sends a signal to controller 584 after catheter 596 automatically moves away from a blocked passage or lumen which is narrower than expected. *See* Ans. 4–6. However, merely because MPS sensor 594 sends a signal to controller 584 after catheter 596 automatically moves does not mean that the signal sent from MPS sensor 594 to controller 584 is responsive (i.e., a reaction or response) to the catheter automatically moving away from a blocked passage or lumen which is narrower than expected.

As pointed out by the Appellant, controller 584 constantly receives signals from MPS sensor 594. Reply Br. 6 (citing Strommer ¶ 185). For controller 584 to constantly receive signals from MPS sensor 594, MPS sensor 594 must constantly send signals to controller 584. *See id.* Accordingly, whether or not the catheter automatically moves away from a blocked passage or lumen which is narrower than expected, MPS sensor 594 will send signals to controller 584. Therefore, the signals sent by MPS sensor 594 are not a reaction or response to the automatic movement of the catheter. Hence, we do not agree with the Examiner’s finding that Strommer discloses “one or more instructions for performing an action with the active portion responsive to receipt of the response control signal,” as recited in claim 132.

Thus, we do not sustain the Examiner’s rejection of independent claim 132 and dependent claims 137, 141–144, 147, 153, and 154 as anticipated by Strommer.

Further, the Examiner fails to rely on the teachings of Hardin, Khait, Riviere or Chiel in any manner that would remedy the deficiency in the Examiner’s rejection as discussed above. Thus, we do not sustain the

Appeal 2020-001061
Application 15/226,991

rejections of claims 133, 134, 140, and 152 as unpatentable over Strommer and Hardin, Khait, Riviere or Chiel.

CONCLUSION

In summary:

| Claims Rejected | 35 U.S.C. § | References/Basis | Affirmed | Reversed |
|---|--------------------|-------------------------|-----------------|---|
| 132, 137, 141–144, 147, 153, 154 | 102(b) | Strommer, | | 132, 137, 141–144, 147, 153, 154 |
| 133 | 103(a) | Strommer, Hardin | | 133 |
| 134, 152 | 103(a) | Strommer, Khait | | 134, 152 |
| 140 | 103(a) | Strommer, Riviere | | 140 |
| 140 | 103(a) | Strommer, Chiel | | 140 |
| Overall Outcome | | | | 132–134, 137, 140– 144, 147, 152–154 |

REVERSED